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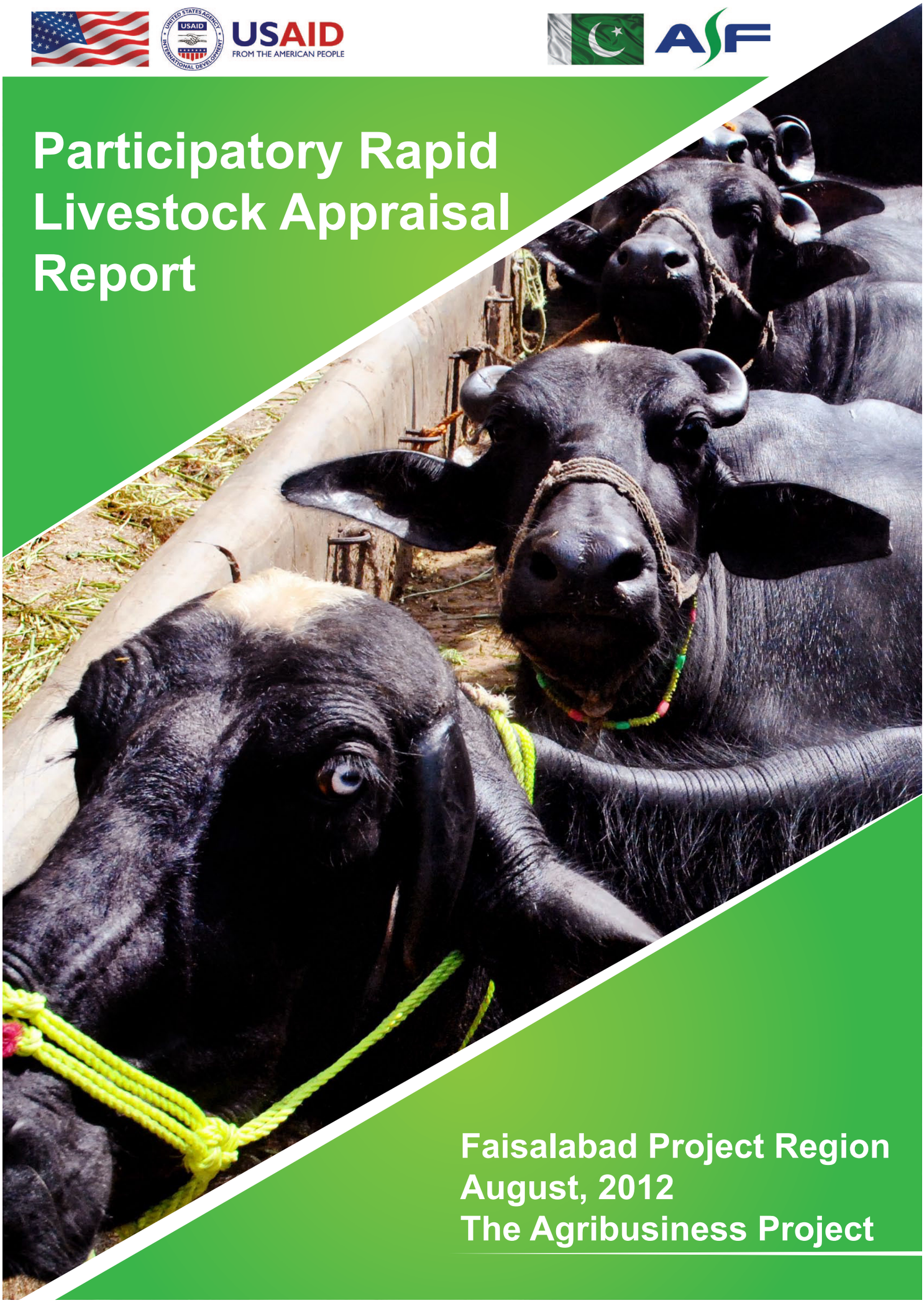
Participatory Rapid Livestock Appraisal Report



Faisalabad Project Region
August, 2012
The Agribusiness Project

Acronyms

ASF	Agribusiness Support Fund
FAO	Food and Agriculture Organization
FGD	Focused Group Discussion
FPR	Faisalabad Project Region
L&DDD	Livestock and Dairy Development Department
NGO	Non-Government Organization
PRLA	Participatory Rapid Livestock Appraisal
TAP	The Agribusiness Project
TTS	Toba Tek Singh
USAID	United States Agency for International Development

Disclaimer: This Participatory Rapid Livestock Appraisal report of Faisalabad Project Region is made possible by the generous support of the American people through United States Agency for International Development (USAID). The contents are the responsibility of The Agribusiness Project and do not reflect the views of USAID or the United States Government.

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Executive Summary

The Agribusiness Project funded by USAID Pakistan is being implemented by Agribusiness Support Fund (ASF) in collaboration with International and national partner organizations. This five years project, commenced on 10th November, 2011 and aims at increasing competitiveness and productivity of horticulture and livestock sub-sectors in Pakistan. The overall goal of the Project is to support improved conditions for broad-based economic growth, create employment opportunities and contribute to poverty alleviation through increase in competitiveness of horticulture and livestock value chains in partnership with all stakeholders. During the first year of the project, a preparatory program was undertaken to gauge the potential of the sub-sector and to prioritize value chains for various project regions including the Faisalabad Project region. Findings from the Participatory Rapid Livestock Appraisal (PRLA) will enable the project to identify and prioritize livestock value chains, opportunities, constraints and state of the business development services to provide required basis for focusing project interventions. The Faisalabad region covers seven districts including Faisalabad, Sargodha, Toba Tek Singh, Chiniot, Mandi Bhauddin, Khushab and Jhang.

Within the framework of the cluster and value chain approach, a two-prong approach was adopted, first preparation for PRLA exercise in the field and second to collect secondary data and develop appropriate tools for quantification of factors so that it can be measured on a scale for ranking/prioritization. This report pertains to work completed based on both secondary data and primary appraisals of livestock sub-sector.

The PRLA methodology provides for probing, analysis and validation of information as they unfold during the field work. Seven factors were applied for the quick analysis of the sub-sector. These include; (i) extent of employment generation; (ii) commercial worth; (iii) percentage of small farmers associated; (iv) women involvement; (v) households associated with the value chains; (vi) understanding growth potential; and (vii) vulnerability of the concerned value chains. Covering 50% of the districts, the exercise was undertaken in the randomly selected settlements/villages within each cluster/region. Each focus group consisted of 10-15 stakeholders, a representative sample of sub-sector, whereas, 2-3 FGDs were carried out in each district.

Prior to the primary data analysis, an appraisal of the livestock sub-sectors was conducted based on the secondary data available to develop objective criteria for the prioritization of sub-sectors within livestock milk, meat, byproducts and fisheries value chains. The indicators used for analysis included i) Growth of the subsector on provincial (Punjab) level in past five years; ii) Pakistan share in the world production; iii) Punjab share in Pakistan; iv) Share of Faisalabad Project Region in Punjab; v) Productivity Gap; vi) Employment potential or labor intensity; and vii) National Production Cost (NPC) calculated by comparing the price in national and international markets.

As per analysis on the basis of secondary data, Pakistan's share in world production was 4.82% in milk, 2.17% in beef, 3.13% in mutton meat, 17.91% in buffalo hides, 1.93% in cattle hides, 4.93% in goat skins and 1.85% in sheep skins. Secondary data revealed that Punjab contributes 63.01% to the national milk production. In addition, Punjab shares 49.17% beef, 59.31% mutton and 38.00% fish, to the total production on national level. The share of Faisalabad region in Punjab is 7.70% for milk, 2.67% for beef and 3.96% for mutton. Fisheries contributed 14.14% to the total production on provincial level (FAO Data base).

Livestock offers a great potential especially with regards to employment of women in rural areas, who are the key persons involved in rearing of animals. According to FAO Statistics production in Punjab showed a steady growth over the past five years, but this increase is attributed to the increase in number of milking animals and not due to increase in yield per animal. On the basis of the analysis, milk ranked highest on the priority index (0-12 points) with 5.79 points, followed by meat at 3.71 points as per PRLA conducted in Faisalabad Project Region. Milk value chain involves 67.50% of the rural households, generating highest percentage (54.50%) of employment among all livestock value chains as per findings of PRLA in Faisalabad Project Region. The increasing demand in national market paired with the subsidy for the dairy sector are high potential opportunities followed by availability of the improved milk breed animals and demand of milk in local and export market. This sector can further be strengthened through establishment of milk collection points and capacity building of livestock owners; improved quality feed and fodder; better infrastructure along with proper system for transportation of milk. Lack of multinational compnaies and milk collection pesturatization and processing facilities are identified as a major constraints hampering the growth of dairy sector in Faisalabad region.

Meat is an ignored and rather underdeveloped sector amongst the livestock value chains in Pakistan primarily due to non-existence of breeds specific to meat production. Further, there is no trend of fattening animals for meat purpose. However, analysis on the basis of secondary data showed that over the past five years there had been an increase in the meat production due to the ever increasing demand in the regional and national markets due to the nutritional value (proteins) from animal origin. Livestock meat value chain provides 67.5% employment opportunities and involves 23.75% of the households in the region as per findings of PRLA in Faisalabad Project Region.

The important opportunities that can be exploited in meat value chains are increasing demand in national and international markets for Halal meat; provision of improved breed animals; better farm management practices; provision of meat chillers and post slaughter processing machinery. The major constraints in meat value chain is the low productivity breed animals, technical and financial resources; absence of cold storages for meat; lack of awareness and training in better farm management practices, calf rearing and feedlot fattening and poor veterinary services. A strategic approach is required to exploit opportunities and address constraints.

Pakistan has only 0.24% share in the world's total inland fish production and Punjab contributes 38% to the national inland fish production (FAO Data base). However, in Punjab, Faisalabad Project Region has no significant share because of the lack of interest of the people for inland fisheries. Lack of technical and financial resources, unavailability of quality fish seed, lack of awareness and skills regarding fish farming, packing and packaging and poor market linkages are key constraints hampering growth of the fishery sector. Provision of quality fish seed/ fingerlings is the highest potential opportunity followed by availability of refers containers. Demand for fisheries in the national market and availability of fish hatchery equipment are the possible opportunities for the expansion of the sector.

The services provided by private sector are efficient and easily available in almost all districts of the region. The input suppliers, middlemen and market agents are the strongest links among all stakeholders across the value chains. NGOs and farmers' associations to some extent are providing technical assistance and trainings to livestock farmers, whereas Government institutions such as Livestock and Dairy Development Department and Commercial Banks have limited provision of services to livestock farmers in the Faisalabad project region. With regard to dairy and meat value chains, local markets are well established in almost all districts of Faisalabad Region.

Introduction

Background

The Agribusiness Project funded by USAID Pakistan is being implemented by Agribusiness Support Fund (ASF) in collaboration with International and national partner organizations. This five years project, commenced on 10th November, 2011 and aims at increasing competitiveness and productivity of horticulture and livestock sub-sectors in Pakistan. The overall goal of the Project is to support improved conditions for broad-based economic growth, create employment opportunities and contribute to poverty alleviation through increase in competitiveness of horticulture and livestock value chains in partnership with all stakeholders.

The Agribusiness Projects objective is to: i) To strengthen the capacity in horticulture and livestock value chains to increase sales to domestic and foreign markets; ii) Strengthen capacity of small holder and enterprises to operate autonomously and effectively; and ; iii) increased agriculture/livestock efficiency and productivity through adoption of new farming techniques and technological innovations among targeted beneficiaries. Project's activities encompass focused technical and capacity building assistance to upgrade and strengthen capacities in the priority value chains in both livestock and horticulture sectors; and a national cost sharing grants program offering a wide range of customized assistance to key players within the priority value chains.

During the first year of the project, a preparatory program was undertaken to gauge the potential of the sub-sector and to prioritize value chains for various project regions including the Faisalabad Project region. PRLA is a short cut yet efficient method for data collection. It is a methodology for action research that uses a range of techniques and plays an important role in probing, developing, analyzing and using indigenous knowledge as a foundation from which to build more productive, valid and sustainable platform for the field work. Findings from the PRLA will enable the project to identify and prioritize livestock value chains, opportunities, constraints and state of the business development services to provide required basis for focusing project interventions. The Faisalabad region covers seven districts including Faisalabad, Sargodha, Toba Tek Singh, Chiniot, Mandi Bhauddin, Khushab and Jhang.

The Livestock sector is broad and covers highly diverse agro-ecological, social and economic dimensions across countries, regions and continents. In Pakistan, livestock is an integral component and considered as the backbone of the agriculture sector, as in any other agricultural economy. The livestock accounts approximately 55.1% of the agriculture value added and 11.5% to the Gross Domestic Product (GDP). Almost 35-40 million rural households are dependent on livestock for their livelihood, deriving 30-40%of their income from livestock. The primitive state of infrastructure and technology catalyzed by the limited availability and high cost of inputs has halted the growth of a polymorphic, high value livestock sub sector that, if driven in the right direction, can contribute towards food security, import substitution, export led growth and poverty alleviation through employment generation. Pakistan has immensely large livestock resources and there is need to exploit and utilize these resources for the substantial growth of the sector. There is a need to focus on understanding productivity gaps, factors blocking development and expansion of livestock value chains, to identify hurdles causing bottlenecks, uncertainties and inefficiencies that hinder competitiveness. Interventions are required across all nodes of the livestock value chains, especially value addition, processing and marketing in order to increase the competitiveness and enhance capabilities of value chain operators to respond to domestic, regional and international markets.

The reports articulate for each region separately to enable better targeting and focusing project interventions. This report covers the project region of Faisalabad. Within the framework of the cluster and value chain approach, a two-prong approach was adopted, first preparation for PRLA exercise in the field and second to collect secondary data and develop appropriate tools for quantification of factors so that it can be measured on a scale for ranking/prioritization. This report pertains to work completed based on both secondary data and primary appraisals of Livestock sub-sector.

Objectives

The objectives of PRLA exercise were to a) identify and prioritize the key livestock value chains in terms of growth potential and capability to benefit as many stakeholders across the value chains b) Identify relevant constraints impeding the realization of opportunities c) assess current state of the extension services to the livestock farmers and d) explore linkages of key livestock stakeholders with the local and national markets.

The PRLA was conducted with a view to prepare the stage for focusing project intervention as well as for the project baseline and value chains benchmarking studies. The PRLA results will enable the project to prioritize value chains (validating the cluster approach), set benchmarks, and support establishment of a database to generate primary data on key indicators to be maintained and updated during the course of project implementation and afterwards supporting the planning, monitoring, evaluation and communication functions of the project.

Methodology and Approach

The consultant(s) assisted the project staff in undertaking a strategic exercise for identification and prioritization of the value chains to prepare a stage for the baseline study and in close consultation with the project management adopted the following methodology to undertake the PRLA exercise;

Desk Review and Study Matrix
The PRLA team , within the framework of the cluster and value chain approach, reviewed the existing data, including the secondary data on the livestock sector, published reports and developed objective criteria for prioritization of value chains within the livestock subsectors i-e, Dairy, Meat, Livestock by products value chains. Following sources were used to collect secondary livestock data for Faisalabad region;

i) Federal bureau of statistics
iii) Pakistan Livestock census 2006 database
iii) FAO Database
iv) Livestock and Dairy Development Board
v) Directorate of Livestock and Dairy Development, Government. of Punjab
vi) Economic Survey of Pakistan.
vii) Information from past research papers and reports from various sources.

The PRLA team, prior to inception of the field work, developed approach and methodology for the study based on international best practices. The methodology focused on quantification of factors, by assigning appropriate weights and scales, so as to contribute to ranking and selection of the priority value chains based on a seven factored grid analysis that included (i) extent of employment generation; (ii) commercial worth; (iii) percentage of small farmers associated; (iv) women involvement; (v) households associated with the value chains; (vi) understanding growth potential; and (vii) vulnerability of the concerned value chains.

Data Collection Tools and Techniques
The PRLA team developed and pre-tested tools for undertaking the rapid appraisal exercise in project regions. These tools included;

i) A five factored grid analysis matrix
ii) Paired ranking matrix for opportunities and constraints
iii) Venn-diagrams for mapping market linkages and service providers:

These tools were pre-tested in the field before being applied to collect primary data by holding Focus Group Discussions (FGDs) with selected groups of relevant stakeholders such as livestock farmers, inputs suppliers, processors, traders, retailers and service providers. Later the data collected through FGDs was verified through validation workshops.

Sample Size
The PRLA exercise was undertaken in all project regions to validate production clusters and establish priority value chains on a regional level. 2-3 FGDs were facilitated and conducted in randomly selected settlements/villages within each cluster/region, covering approximately 50% of the districts in each region. A group of 10-15 stakeholders related to the livestock value chains participated in each FGD.

Staff Orientation and Pre-testing of Tools
The PRLA team designed and co-facilitated a two-step training workshop comprising the orientation of the project staff regarding the use of pre designed tools, FGD facilitation & data collection techniques to be used in the field; and a real pre-testing field exercise followed by a debriefing session to help understand and discuss the constraints faced during the exercise in order to revise and improve the tools and techniques.

Primary Data Collection
4 FGDs were organized and facilitated by trained project staff in randomly selected clusters from within 07 districts of Faisalabad Project Region. The participants of FGDs that represented stakeholders from each node across the livestock value chains selected and prioritized value chains through mutual consensus during group discussions that

were held and facilitated by the project teams.

Backstopping and Monitoring
The consultants provided a continued coaching and backstopping support to the project staff during orientation, pre-testing and PRLA exercise in project target regions.

Data analysis and Reporting
The primary data gathered via the field investigations through observations and FGDs was recorded using pre designed tools and later reproduced in tabulated form using MS Excel sheets. The final analysis was done by applying statistical tools to the primary data and shown in the form of bar graphs and tables to provide a highlighted outlook on the weaknesses and strengths of the livestock value chains.
livestock value chains selected and prioritized value chains through mutual consensus during group discussions.

Appraisal of Livestock Value Chain based on Secondary Data

Data collection and mining

The secondary data for the livestock sector was collected from various sources mentioned in the desk review and study matrix. The USAID's Pakistan livestock database 2006 and Pakistan livestock Census 2006 data were used as prime source (since these were the only two providing livestock data on district level for all four provinces) and using projections a timeline data was obtained.

Overall analysis of Livestock and Fisheries value chains

Livestock occupies a unique position in the socio-economic development of Pakistan. It also plays an important role in the rural economy as supplementing family incomes and generating gainful employment in the rural population, particularly among the landless labourers, small and marginal farmers and women. About 30-35 million rural population is engaged in livestock raising, having 2-3 cattle/buffalo and 5-6 sheep/goat per family which help them to drive 30-40 per cent of their income from livestock.

Dairy and meat sector is a considerable major sector of livestock. Livestock contributes approximately 55.1 per cent to the agriculture value added and 11.5% to the national GDP during 2010-12. Gross Value Added of the livestock sector at constant factor cost has increased from PKR 672 billion (2010-11) to PKR 700 billion (2011-12) showing an increase of 4.04 per cent as compared to previous year which was 3.97%. (Source: Economic survey of Pakistan 2011-12). The projected data was analyzed using tabulation and basic statistical tools such as linear regression to come up with final scoring on the basis of grid analysis given below in Table1 and 2.

Table 1: Overall analysis of value chain

Indicators	Milk	Beef Meat	Mutton Meat	Fish	Buffalo	Cattle	Goat	Sheep
Growth Percentage	3.23%	3.33%	2.13%	4.45%	2.99%	3.70%	2.67%	1.18%
Pakistan Share in World	4.82%	2.17%	3.13%	0.2%	17.91%	1.93%	4.93%	1.85%
Punjab share in Pakistan	63.01%	49.17%	59.31%	38.00%	50.92%	48.14%	61.95%	52.31%
Faisalabad Region share in Punjab	7.70%	2.67%	3.96%	14.14%	10.84%	11.51%	9.97%	9.36%
Productivity Gap *	60.92%	80%	89%	99.98%	69.61%	85.30%	83.00%	92.09%

Source: FAO database

Two livestock value chains that were analyzed on the basis of secondary data include:

i) Milk value chain

ii) Meat value chain (Beef Meat and Mutton Meat)

Table 2: Overall ranking of value chains

Priority sub-sectors	Clusters/Districts	Total Production of the Cluster (000Tons)	Percent share in the Punjab
Milk	Faisalabad and Jhang	1,399,8815	7.70
	Sargodha and Mandi Bahuddin		
Meat	Faisalabad and Jhang	35,440	6.63
	Sargodha		
Fish	Faisalabad, Jhang and Toba Tek Singh	11,573	14.14
	Sargodha and Khushab		

Source: FAOdatabase

* Pakistan`s yeild versus average World yeild.

The analysis on the basis of secondary data gave a broader and comparative outlook of the livestock value chains at regional and national levels and helped to understand the glitches and potential within these value chains. Analysis showed growth of livestock products, byproducts and inland fisheries in Punjab and Pakistan over the past five years, Pakistan's share in world production.

Inland fisheries showed the highest productivity gap of 99.98% whereas production gap for milk at 60.92% was lowest among all commodities. Beef meat and mutton meat had production gap of 80% and 89% respectively. Within livestock byproducts, sheep skin had highest production gap of 92.90% followed by cattle hides at 85.30%, goat skins at 83% and buffalo hides at 69.91% as mentioned in Table 1.

Analysis of Milk value chain

According to FAO statistics Milk production in Punjab showed a steady growth over the past few years (Figure 1), but this increase is attributed to the increase in number of milking animals and not due to increase in yield per animal. There was an actual decrease in the milk production during the year 2010 because of losses in livestock population due to natural calamities. This decrease is not showed on the index due to unavailability of the data from disaster management sources.

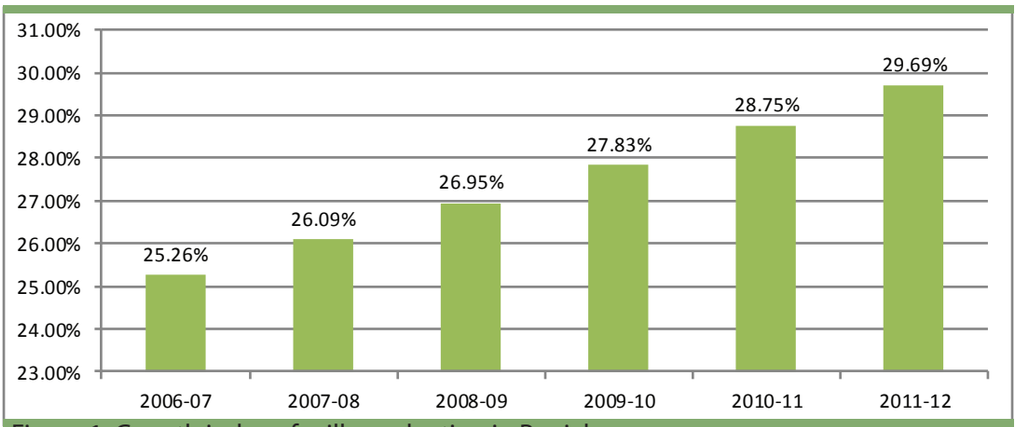

Figure 1: Growth index of milk production in Punjab
Source: FAO Data base

According to the FAO database, Punjab contributes 63.01% to the national milk production. Whereas, share of Faisalabad Project Region in Punjab stands at 7.70%. Among Faisalabad Project Region districts, Jhang is the highest milk producing area with a production of 435,9275 Liters (2006) followed by Faisalabad 3973,621 Liters and Mandi Bahuddin 2,920,088 Liters. Medium to high yielding districts include Sargodha with milk production of 2,745,831 liters and Toba Tek Singh 1,580,548 liters during year.

Analysis of Meat value chain

Meat industry in Pakistan is developing these days. The export of meat (beef, mutton, and camel) has increased from $ 108.54 million (2010-11) to $123.61 million in 2011-12 showing an increase of 13.9 per cent. Dairy animals are also being used as beef animals after completion of its productive years. Male calves of dairy animals and dairy bulls when no further required for breeding purposes are also utilized for beef purposes.

Meat sector hasn't achieved its potential amongst the livestock value chains in Pakistan primarily due to non-existence of breeds specific to meat production. Further, there is no trend of fattening animals for meat purpose. However, analysis on the basis of secondary data showed that over the past few years there had been an increase in the meat production due to the ever increasing demand in the regional and national markets for the protein from animal origin.

Table 3: Punjab's Share in Pakistan on beef production

	2006-7	2007-8	2008-9	2009-10	2010-11	2011-12	Average	% Share
Punjab Share	263,957	272,897	282,147	291,710	301,604	311,837	287,359	49.17
Region Share								2.67

Source: Livestock Census 2006 (Calculated from number of slaughtered animals on the basis of yield per carcass)

Table 4: Mutton meat share of Punjab in Pakistan

	2006-7	2007-8	2008-9	2009-10	2010-11	2011-12	Average	% Share
Punjab Share	335,537	342,733	350,102	357,647	365,374	373,287	354,113	59.31
Region Share								3.96

Source: Livestock Census 2006 (Calculated from number of slaughtered animals on the basis of yield per carcass

Punjab contributes 49.17% to Pakistan's annual beef production (calculated from number of animals slaughtered) and 59.31% to total mutton production. Faisalabad region holds a share of 2.67% in beef and 3.96% in mutton production in Punjab. Within Faisalabad Project Region, Faisalabad ranks as the highest meat producing district with an annual production of 13.89 thousand tons of mutton and 50.52 thousand tons of beef. Sargodha is the second highest in terms of meat production with 17.13 thousand tons of beef and 5.24 thousand tons of mutton produced every year.

Analysis of Livestock byproducts value chain

Livestock byproducts, especially hides and skins, had always been ignored despite their importance in the international market. Lack of awareness, absolute absence of proper handling of equipment and techniques, result in high losses each year. There is huge potential for livestock byproducts in domestic and international markets. Due to limited availability of relevant data on district level, the number of hides and skins were calculated against the number of animals slaughtered every year and hence the actual losses during handling are not evident in this analysis.

Analysis of Fisheries Value Chain

Inland fisheries or aquaculture being considered an expensive business requiring land, excavation, expensive pumps for oxygenation and formulated fish feed could not gain much popularity and momentum as a viable value chain in Pakistan. Statistical analysis on the basis of secondary data showed that the growth rate of fish production declined by 6% in Pakistan over past decade. Pakistan has only 0.2% share in the world's total inland fish production and Punjab contributes 38% to the national inland fish production. However, within Punjab, Faisalabad region's share is 14.14%. It is obvious that with proper interventions, there is high potential of inland fisheries in this particular region.

Appraisal of Livestock Value Chain based on Primary Data

Selection and prioritization of the value chains

This process was carried out to identify the value chains that offer most promising prospect for economic growth and poverty alleviation through employment generation. It was based on the review of key issues that have an impact on the development of livestock and fisheries value chains and the capacity of a given region to produce and market livestock products and byproducts in the domestic and international markets. The choice of value chains was further refined by applying priority criteria, weighting their relative importance and ranking on score sheet based on the composite index that was calculated on the basis of seven factors used in grid analysis. A graphical illustration of the summarized overview of prioritization is shown in Figure 2 below.

As is evident from the prioritization index, milk with the highest priority index of 5.79 points scored to the top, followed by meat with a priority index of 3.71points.

The FGDs conducted in Faisalabad Project Region showed that Faisalabad is the major milk shed area among all districts where maximum growth of 30.5% in milk production was observed during the past five years. Sargodha and Toba Tek Singh also showed medium to high potential for milk value chain where the growth in milk production over past five years was on the higher side. Dairy value chain involves maximum percentage (67.50%) of the households, generating highest percentage (54.50%) of employment among all livestock value chains.

The significant growth in meat value chain observed in Faisalabad where the growth rate for past five years is 13.75%, ranking it as the high potential zone. Sargodha and TT Singh showed a medium to high potential for meat value chains. Livestock meat value chain provides 6.75% employment opportunities and involves 23.75% of the households in the region.

Figure 2: Prioritization of livestock value chains
Source: PRLA activity August, 2012

Factor wise Prioritization of the Value Chains

Ranking of the livestock value chains was carried out on the basis of following seven factors used in the grid analysis matrix.

Prioritization on the basis of percentage employment potential

Among all livestock value chains, milk has the highest potential of 54.50% for employment generation. Meat value chain has the ability to create 6.75% employment. It is important to note that milk value chain involves more labor force due to the efforts required for feeding, management and milking of the animals and post production handling of the milk as compared to any other livestock value chain.

Prioritization of different livestock value chains with regard to their ability to create employment is shown in Figure 3.

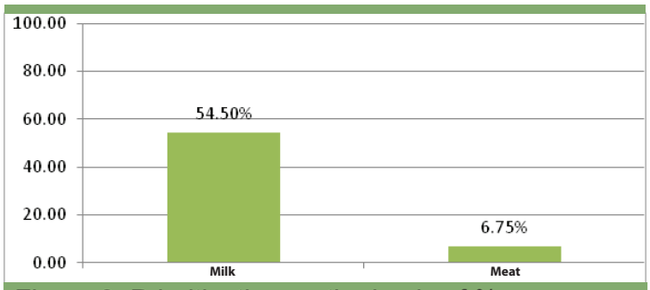

Figure 3: Prioritization on the basis of % employment potential
Source: PRLA activity August, 2012

Prioritization on the basis of percentage commercialization

Commercialization can be described as the percentage of the product that is marketed. Meat is 97.50% commercialized, the reason being that animals raised for meat purpose or culled animals are sold in the market and slaughtered. Milk, due to its perishable nature and traditional use in different hot and cold beverages, is used for domestic consumption and therefore showed a lower percentage in comparison to other livestock value chain. In Faisalabad Project Region milk scored 73.75% on the index of commercialization. Depicted below (Figure 4) is an overview of livestock value chains with reference to commercialization.

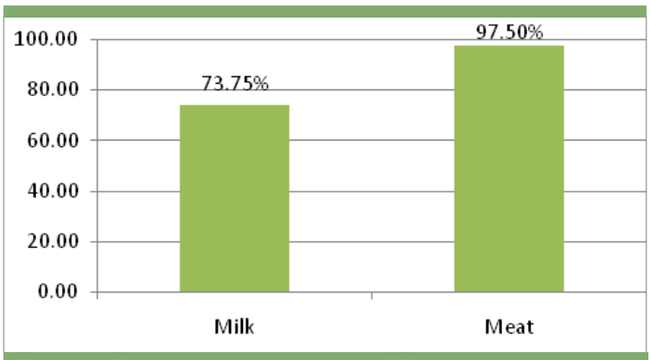

Figure 4: Prioritization on the basis of % commercialization
Source: PRLA activity August, 2012

Prioritization on the basis of small farmers involvement

The assessment of livestock value chains on the basis of percentage small farmer involvement in Faisalabad Project Region revealed that milk value chain has the highest percentage (70%) of small farmer's involvement. This is easily explained by the fact that 70-80% of milking animals belong to small holders with 1-4 animals. Whereas, 68.50% of small farmers are involved in meat business. Since there are no or very small number of animals raised for meat purpose, usually animals that are dry, or have low production and male calves are sold in the market or to butchers for slaughtering and 80% of these animals belong to the small holders .The involvement of small farmers in milk and meat value chains in the region is shown in Figure 5 below.

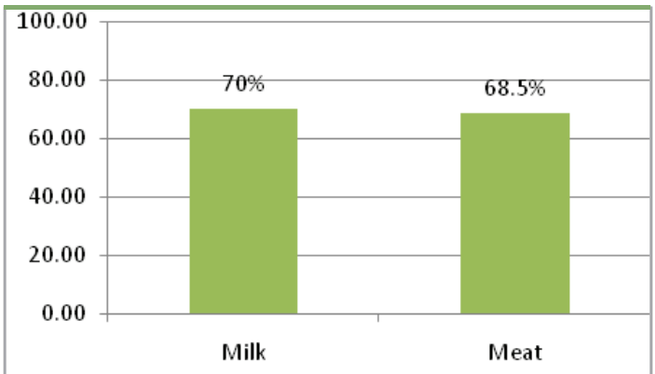

Figure 5: Prioritization on the basis of % small farmer's involvement
Source: PRLA activity August, 2012

Prioritization on the basis of percentage women involvement

Women involvement is considered to be an important factor for prioritization of the value chains. As per conclusion from the FGDs data, it was found that milk value chain has the highest priority index (30.50%) with regard to the percentage of women involved. The graph below (Figure 6) below shows the percentage women involvement was 12.50% for meat value chain. However, high indices of % women involvement in milk and meat value chain are limited to the production phase only since women have very limited or no role in marketing of milk and meat value chains.

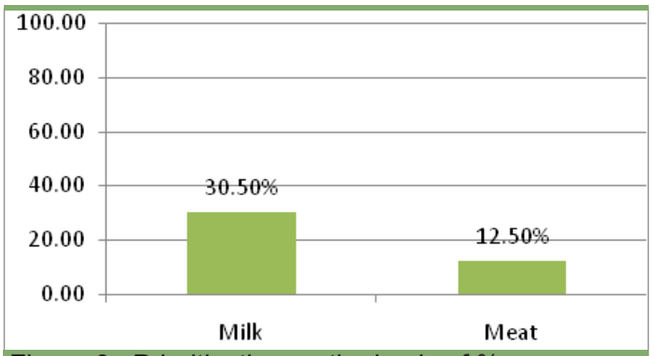

Figure 6: Prioritization on the basis of % women involvement
Source: PRLA activity August, 2012

Prioritization on the basis of percentage growth during past five years

Growth is the most important factor for prioritization of value chain as it gives a clear idea of potential of subsector in a particular region. The livestock value chains were assessed on the basis of their growth observed during the past five years in Faisalabad region. Figure 7 below reflect 30.50% and 13.75% growth rates for milk and meat value chain respectively.

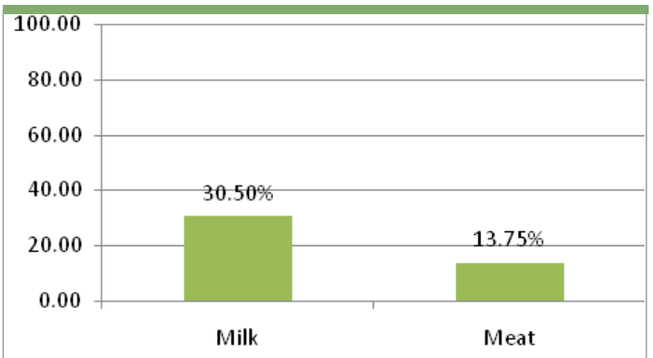

Figure 7: Prioritization on the basis of % growth during past five years
Source: PRLA activity August, 2012

Prioritization on the basis of percentage losses

Pre and Post production losses have a high impact on the selection and prioritization of a value chain. Meat value chain showed highest percentage of losses (11.25%) among all livestock value chains because of high mortality rate among animals. Milk value chain had 8% losses. An illustration of prioritization of value chains on the basis of percentage losses is portrayed in (Figure 8).

The losses in milk, meat include both pre and post production losses. Pre-production losses mean mortality or inability of animal to produce due to various reasons whereas post production losses occur usually during handling and transportation and are highest in milk value chain due to spillage and storage. Losses in meat value chain usually attribute to pre-production losses.

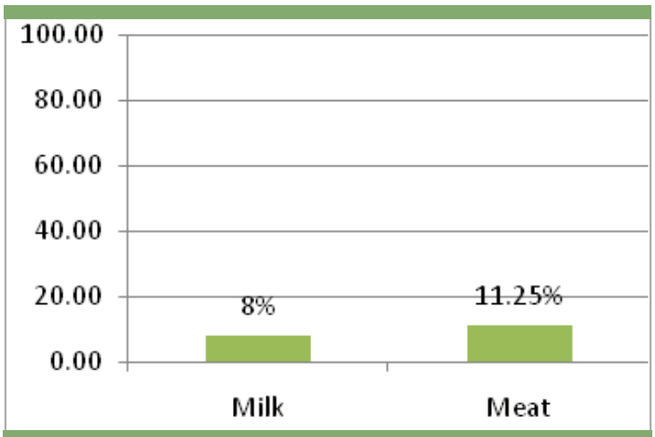

Figure 8: Prioritization on the basis of % losses
Source: PRLA activity August, 2012

Prioritization on the basis of percentage household involvement

Percentage of households involved is another important factor to be considered in the process of prioritization of a particular value chain. As illustrated below in Figure 9, milk value chain had the highest index of 67.50% household involvement since majority of the rural population is engaged either directly or indirectly in milk value chain. Second on the priority index was the meat value chain involving 23.75% household.

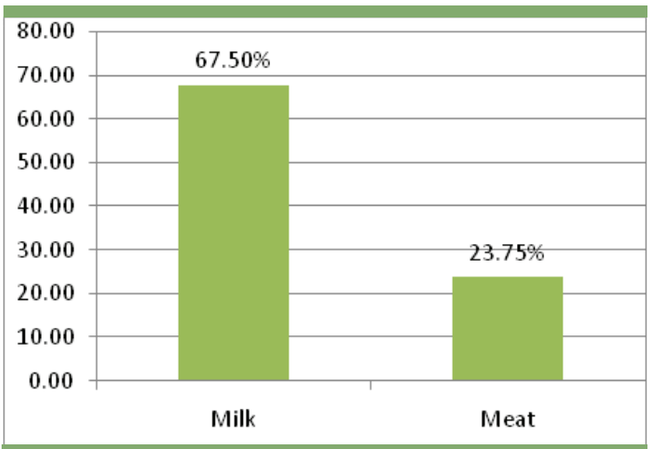

Figure 9: Prioritization on the basis of % household involvement
Source: PRLA activity, August, 2012

Prioritized Opportunities and Constraints in Livestock Value Chains

Prioritized opportunities and constraints in Milk

Paired ranking tool was used for prioritization of the opportunities. The participants of FGDs ranked the list of opportunities as explained in the Table 5. On the basis of FGDs data analysis for milk value chain, the increasing demand of establishing multinational milk companies for the dairy sector were highest potential opportunities followed by establishing milk collection centers and milk sale points at national and local level ranked second and milk pasteurization ranked third on the priority index.

Table 5: Priority opportunities in milk value chain

Priority opportunities	Score	Rank
Increasing demand by the milk companies	4	1
Increasing demand in local market	3	2
Milk pasteurization	2	3
Processing industry	2	3
Buffalo cheese export	1	4

Source: PRLA activity August, 2012

The constraints in milk value chain were identified and prioritized by the participants in FGDs.Table 6 below is a ranking index for the constraints.

Lack of multinational companies, milk collection centers and sale points and milk pasteurization were as the high intensity constraints hampering the growth of dairy sector in Faisalabad Project Region.

These constraints can be addressed through breed improvement (either by introducing high yielding animals or cross breeding with high producing breeds), improved farm management practices, timely and efficient availability of veterinary health services, establishment of integrated milk collection and transportation system. Easy access to soft loans can help resolve financial issues hampering the growth of dairy value chain.

Table 6: Priority constraints in milk value chain

Priority constraints	Intensity
Lack of multinational companies	High
Lack of collection centers and milk points at local level	High
Lack of milk pasteurization facilities	High
Lack of processing industry	Medium
Lack of facilities for buffalo cheese manufacturing and export	Medium

Source: PRLA activity August, 2012

State of the Service Providers

Service providers are of prime importance in all value chains. These include Government bodies, private sector, NGOs and associations, middlemen, buyers, market agents and exporters. A detailed assessment of the service providers, services offered and their strength was carried out using the information shared by participants of FGDs during PRLA exercise. The role of Government organizations such as agriculture extension, Livestock and Dairy Development Department and Fisheries Department is to provide technical information and assistance, on farm and off farm trainings and creating awareness about technological innovations relevant to a particular sub sector where as the local administration defines and regulate prices. Although the services provided by Government agencies are free yet their ranking was weak in all districts of Faisalabad region.

The participants of FGDs provided information about the service providers and related livestock and fisheries value chains and ranked them as shown in Table 7 below.

Table 7: State of the service providers

Service Providers	District	Strength	Paid/Free	Services Provided
Livestock and Dairy Development Department	Faisalabad	Weak	Free	Training and technical assistance
	Chiniot	Weak	Free	
	Sargodha	Weak	Free	
	TT Singh	Weak	Free	
Input suppliers	Faisalabad	Medium	Cash	Input Supplies
	Sargodha	Medium	Cash	
Middlemen	Faisalabad	Strong	Credit	Intermediate link between producers and market
	Sargodha	Strong	Credit	
Local confectioners	Faisalabad	Weak	Free	Buy milk
	Sargodha	Weak	Free	
Banks and Co-operatives	Faisalabad	Weak	Cash	Credit on mark up
	Sargodha	Weak	Credit	
Food inspection department	Faisalabad	Medium	Free	Quality control
	Sargodha	Medium	Free	
NGOs	Faisalabad	Medium	Free	Training and technical assistance
Dairy Association	Faisalabad	Weak	Free	Training and technical assistance
	Sargodha	Weak	Free	
Private companies/BDSPs	Faisalabad	Weak	Free	Technical assistance
Private Agri chemical supplies	Faisalabad	Weak	Cash	Supply pesticides
Market agents	Faisalabad	Strong	Cash/Credit	Supply inputs and animals from other districts
	Sargodha	Strong	Cash/Credit	
Veterinary medicine companies	Faisalabad	Strong	Cash	Supply vet medicines, vaccines etc
	Sargodha	Strong	Cash	

Source: PRLA activity August, 2012

Private sector encompassed all input suppliers and facilitators within the value chain. The services provided by them were paid and on cash basis. However, they ranked medium on the index in almost all districts because of their demand, easy availability and efficiency. NGOs and fellow enterprises had strong linkages in Faisalabad and Sargodha. Dairy associations showed strong link in Faisalabad and Sargodha since they are high milk shed clusters. Banks were also mentioned as weak link because of the difficult access for small holders and high markup rates. middlemen and market agents were the strongest link among all service providers in dairy and meat value chains because they are the sole source of readily available credit facility for majority of the small holders.

State of the Market Linkages

Market linkage plays an important role in prioritizing value chains in a particular region. It also helps determine the price of a particular produce and profitability. Market linkages were assessed and ranked as strong, medium or weak depending on the basis of share of produce in that particular market, distance from production site and the cost of transportation. With regard to dairy and meat value chains, local markets had the strongest links in almost all districts of Faisalabad region due to easy access, less cost of transportation and less losses. FGDs in Faisalabad Project Region revealed the folowing information regarding market linkages in Fasilabad Region.

Table 8: State of market linkages

Subsector	District	Market linked	Strength
Milk and Meat	Faisalabad	Faisalabad (Local)	Strong
Milk and Meat		Jaranwala	Strong
Milk and Meat		Samundri	Medium
Milk and Meat	Sargodha	Sargodha (Local)	Strong
Milk and Meat		Bhalwal	Strong
Milk and Meat		Kot Momin	Weak
Milk and Meat		Silianwali	Weak
Milk and Meat		Khushab	Weak

Source: PRLA activity August, 2012

Conclusion

According to FAO Statistics, milk production in Faisalabad region showed a steady growth over the past few years, but this increase is attributed to the increase in number of milking animals and not due to increase in yield per animal. The increasing demand in national market paired with the subsidy for the dairy sector are high potential opportunities followed by availability of improved milk breed animals and better options for improved animal housing and management.

This sector can be further strengthened by establishment of milk collection points and capacity building of livestock owners, availability of improved breeds of animals, improved quality feed and fodder; better infrastructure along with proper transportation of milk.

Based on the detailed PRLA survey, the following conclusions can be drawn;

- Lack of improved breed animals affect milking capacity and weight gaining ability of the animal. Only selected breeds with high, milk yielding capacity and giving good beef and mutton are reared and slaughtered.

- Selling price is another limiting factor for the determination of the profitability of this business. In Faisalabad region dairy and meat business is controlled by the informal sector. There are only few semi-organized markets for the branded safe and healthy fresh milk, beef and mutton. In order to avoid this risk in the region in price fluctuations and to improve the economic stability of farmers, the project has to support through contractual farming by which they raise their animals for milk and fattening purposes according to certain standards.

- Faisalabad region animal population is very scattered, which makes the procurement of the high yeilding breed of animals is very difficult for the progressive famers in dairy and meat sector. Moreover for regular availability, the supply chain of animals must be given priority and necessary agreements with the farmers for improving the genetics of indigenous animals.The Farmer Enterprise Groups (FEGs) formation and cluster approach will be one of the successful tools to manage the supply of these animals.

- Disease affects the feed conversion ability of animals kept at the farms. Sometimes severe disease attacks leads towards mortality of the animals. In order to control these threats, capacity building through technical and managerial trainings in dairy farm management and hygienic and sanitary measures can improve the existing conditions.

- Pakistan is good proximity with middle-eastern countries as compared to other market rivals. Being the great potential by the livestock farmers in our country, the regional interest can be boosted up and enhanced by supplying traceable health animals for export markets to be utilized for both milk and meat.

- Faisalabad Project Region has also a significant share in inland fisheries due to interest of the people in the region. Provision of quality and good breed fish seed/fingerlings is the highest potential opportunity followed by availability of refers containers. Owing to the demand in the national market, availability of fish hatchery equipment are other opportunities that need to be considered.

- The services provided by private sector are efficient and easily available in all districts of the region. The input suppliers, middlemen and market agents are the source of strongest links among all stakeholders across the value chains. NGOs and farmers' associations providing technical assistance in the form of capacity building and trainings are among the medium to stronger linkages.

. Livestock in Faisalabad region offers a great potential especially with regards to employment of women in rural areas, who are the key persons involved in rearing of animals. Milk is the most important livestock product followed by meat.

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